

Serial No. 10/378,012

COMPLETE LISTING OF CLAIMS

Please replace the claims with the following complete list of claims:

1. (Currently Amended) A system for measuring a weight upon a seating surface of a seat having a bracket, said system comprising:
at least one ferromagnetic element mechanically coupled between the bracket the seating surface and a vehicle floor such that strain is induced in said at least one ferromagnetic element responsive to the weight thereon;
a fastener extending between the bracket and the floor; and
a first sensor comprising (i) a magnet generating a magnetic field magnetically coupled to the at least one ferromagnetic element on a first side of the fastener and (ii) an inductor magnetically coupled to the at least one ferromagnetic element on a second side of the fastener opposite the first side, said magnet and inductor mounted adjacent said ferromagnetic element, said magnetic field altered by said strain in said ferromagnetic element, said inductor generating a signal based upon the alteration in said magnetic field.
2. (Original) The system of claim 1 wherein said at least one ferromagnetic element is a plurality of ferromagnetic elements, which together receive all of the weight on the seating surface.
3. (Cancel)
4. (Cancel)
5. (Cancel)
6. (Original) The system of claim 1 wherein said at least one ferromagnetic element receives all of the weight on the seating surface.
7. (Original) The system of claim 6, wherein said magnet is an electromagnet and said inductor includes a coil.

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8. (Original) The system of claim 7, further including an actuator for a vehicle safety device, said actuator actuating said vehicle safety device based upon said signal from said first sensor.
9. (Currently Amended) A method for activating a switch including the steps of:
 - a) measuring a strain in a first solid ferromagnetic element coupled between a first seat bracket and a floor;
 - b) activating a first vehicle function based upon said step a);
 - c) measuring strain in a second solid ferromagnetic element solidly between a second seat bracket and the floor;
 - d) activating a second vehicle function based upon said step c); and
 - e) determining a weight upon the seating surface based upon said steps a) and c).
10. (Cancel)
11. (Currently Amended) The method of claim ~~10~~ 9 wherein said step a) is performed utilizing a magnetostrictive sensor.
12. (Original) The method of claim 11 wherein said step c) is performed using said magnetostrictive sensor.
13. (Cancel)

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14. (Currently Amended) A system for measuring a weight upon a seating surface, the system comprising:
- a plurality of solid ferromagnetic elements mechanically for coupling coupled between the seating surface and a vehicle floor such that strain is induced in the plurality of ferromagnetic elements responsive to the weight on the seating surface; and
- a plurality of sensors each comprising (i) a magnet generating a magnetic field and (ii) an inductor, each sensor mounted adjacent one of the plurality of ferromagnetic elements, the magnetic field from each sensor altered by the strain in the adjacent ferromagnetic element between the magnet and the inductor, the inductor generating a signal based upon the alteration in the magnetic field.
15. (Original) The system of claim 14 wherein the plurality of ferromagnetic elements are configured to receive all of the weight on the seating surface.
16. (Original) The system of claim 14 wherein the plurality of ferromagnetic elements are mechanically coupled between the seating surface and the vehicle floor.
17. (Original) The system of claim 14 further including a controller receiving information based upon the signals from the inductor in each of the sensors.
18. (Original) The system of claim 17 wherein the controller determines a position of an occupant on the seating surface based upon the information.
19. (Original) The system of claim 17 wherein the controller determines the weight on the seating surface based upon the information.
20. (Cancel) The system of claim 19 wherein the plurality of ferromagnetic elements are mechanically coupled between the seating surface and the vehicle floor.

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21. (New) The system of claim 1 wherein the at least one ferromagnetic element is a metal core solid between the bracket and the vehicle floor.
22. (New) The system of claim 21 wherein the bracket, the magnet, the coil are disposed above the at least one ferromagnetic element, and the floor is disposed below the at least ferromagnetic element.
23. (New) The system of claim 22 wherein the fastener passes through the bracket, the at least one ferromagnetic element and through the vehicle floor.
24. (New) The system of claim 14 wherein the seating surface is formed on a seat, the seat including a plurality of brackets secured to the vehicle floor by a plurality of fasteners, wherein the ferromagnetic elements are solid between the brackets and the floor.
25. (New) The system of claim 24 wherein the magnets, the brackets and the inductors are mounted above the ferromagnetic elements and wherein the ferromagnetic elements are mounted above the vehicle floor.
26. (New) The system of claim 14 further including a plurality of fasteners connecting the seating surface to the vehicle floor, wherein the magnet and the inductor are mounted on generally opposing sides of the fastener in each of the plurality of sensors.